

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In re Applicant:

Pinchas SHALEV et al.

Serial No.: 10/535,536

Filed: May 18, 2005

For: ELECTRIC SHAVER WITH HEATED
CUTTING ELEMENT AND WITH
DEODORANT DISPENSER

Examiner: Stephen J. RALIS

Group Art Unit: 3742

Attorney
Docket: 35746

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

APPLICANTS' BRIEF ON APPEAL

Sir:

Further to the Notice of Appeal and Pre-Appeal Brief filed on April 2, 2008, and a Pre-Appeal Brief Conference Decision issued on May 21, 2008, a Response after Final Rejection filed on April 2, 2008, an Advisory Action issued on May 21, 2008, and a personal interview between the Examiner and Applicant's representative conducted on June 2, 2008, attached please find the Appeal Brief.

This application enjoys Small Business Entity (SBE) status.

Please charge the Appeal Brief fee of \$255.00 to Deposit Account 50-1407. A duplicate copy of this form is enclosed.

This Appeal Brief is being filed on or before July 21, 2008, and for which a one month extension of time fee is due and enclosed herewith.

Respectfully submitted,

Paul Fenster

Paul Fenster,
Registration No. 33,877

Date: July 8, 2008



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APPEAL BRIEF

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REAL PARTY OF INTEREST

The real party in interest of this appeal is the following party: Radiancy Inc.

RELATED APPEALS AND INTERFERENCES

This appeal has no related proceedings or interferences.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN THE APPLICATION

The claims in the application are: 1-36

B. STATUS OF ALL THE CLAIMS IN THE APPLICATION

Claims canceled: 1-6, 8, 12 and 17

Claims withdrawn from consideration but not cancelled: NONE

Claims pending: 7, 9-11, 13-16 and 18-36

Claims allowed: NONE

Claims rejected: 7, 9-11, 13-16 and 18-36

Claims objected to: NONE

C. CLAIMS ON APPEAL

The claims on appeal are: 7, 9-11, 13-16 and 18-36

STATUS OF AMENDMENTS

An amendment after Final Rejection was not filed. Therefore, claims 7, 9-11, 13-16 and 18-36 on appeal are as amended in the response to Office Action filed October 11, 2007.

SUMMARY OF CLAIMED SUBJECT MATTER

The independent claims in the application are claims 7 and 11, which are repeated below with reference to passages in the application as filed providing support, in bold letters.

Independent claim 7 refers to a hair cutting apparatus comprising a structure adapted for contacting an area of skin having hair, the apparatus comprising:

a) a heated elongate element heated to a temperature sufficient to cut hair, mounted on the structure; and **{page 2, lines 2-5; page 9, lines 12-15; page 15, lines 4-6; Figs. 1-4, reference 260}**

b) an electrostatically charged element adapted for collecting cut hair. **{page 15, lines 4-11; Fig. 4, reference 370}**

Claim 9 depends on claim 7 and further recites that the heated element is a wire. **{page 2, lines 1-5}**

Independent claim 11 refers to a method of collecting cut hair, comprising:

a) cutting hair with a heated elongate element; and **{page 2, lines 2-5; page 9, lines 12-15; page 15, lines 4-6}**

b) collecting the hair cuttings from the skin of the user with an electrostatically charged element. **{page 15, lines 4-11}**

Claim 14 depends on claim 11 and further recites that the heated elongate element is a wire. **{page 2, lines 1-5}**

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

A. GROUND OF REJECTION 1 (CLAIMS 7, 10, 11, 13, 15 AND 17)

Claims 7, 10, 11, 13, 15 and 17 stand rejected under 35 U.S.C. §102(b) as anticipated by Kelman (WO Publication No. 92/16338).

B. GROUND OF REJECTION 2 (CLAIMS 9 AND 14)

Claims 9 and 14 stand rejected under 35 U.S.C. §103(a) as being obvious over Kelman in view of Inderosa (US Patent No. 5,065,515).

C. GROUND OF REJECTION 3 (CLAIMS 16 AND 18-36)

Claims 16 and 18-36 stand rejected under 35 U.S.C. §103(a) as obvious over Kelman in view of newly-cited Bermingham (US Patent No. 3,045,345).

ARGUMENTS

A. GROUND OF REJECTION 1 (CLAIMS 7, 10, 11, 13, 15 AND 17)

Claims 7, 10, 11, 13, 15 and 17 stand rejected under 35 U.S.C. §102(b) as anticipated by Kelman (WO Publication No. 92/16338). Independent claims 7 and 11 are the only independent claims in this group.

Applicants note that Kelman shows a device which cuts hair by impinging a laser on it.

Since the Examiner's reasoning is set out most clearly in the Advisory Action issued on May 21, 2008 extensive reference is made to this document.

Applicants respectfully traverse the rejection and submit that the Examiner has not set out a *prima facie* anticipation with respect to independent claims 7 and claim 11 since Kelman fails to disclose at least one feature of each of these claims.

A.1 Claim 7 distinguishes over the cited reference

Claim 7 requires "a heated elongate element heated to a temperature sufficient to cut hair, mounted on the structure". According to the Examiner, the heated elongate element of claim 7 is shown in Kelman as laser beam 18 which the Examiner argues is a physical element producing a physical effect onto the hair. Applicants respectfully disagree and submit that not only can a laser beam not be considered as an *elongate element*, a laser beam is also not *heated* to any temperature, certainly not to a temperature sufficient to cut hair. Moreover, a laser beam is not *mounted* on a structure as required by claim 7. A laser beam can not be mounted on anything.

The Examiner's reasoning of the rejection (in the advisory action) reads:

"Kelman discloses a laser beam (18) that is used to cut hair (Abstract). A laser beam is an elongate beam of light that is amplified by stimulated emission of radiation. Kelman further disclose the hair being vaporized or carbonized at the location of impingement of the laser beam (18) thereon (page 5, lines 18-24). To carbonize hair by a laser beam (18) would involve a burning/heating since the laser beam (18) light is not carbonizing by a chemical process or by fossilization. Furthermore, the laser beam (18) carbonizes the hair due to the heat created by the energy distribution to the higher density properties of the hair compared to its surrounding air. The density of the air surrounding the laser beam (18), which in essence is part of the laser beam (18) is heated as well, due to particle collision with the air, therefore the laser beam would be hot compared to the air surrounding the device, and in return heated. In addition, the laser beam (18) with its inclusive surrounding air, is heated and heated to a temperature sufficient to cut hair, or else the hair would not be cut."

The Examiner's reasoning is completely at odds with the basic physics of lasers. As is well known to anyone who has ever dealt with laser beams, the concept of temperature is completely foreign to electromagnetic radiation which can transmit energy but which does not have any temperature characteristic.

There is no temperature related to a laser beam. Temperature is a measure of the hotness of an object measured on a definite scale. (Merriam Webster). There is no such scale for or the concept of temperature for lasers or other electromagnetic energy. Even when temperature is used for colors, it is actually a reference to the color of light emitted by a heated body. It is never utilized for lasers, since they have a single wavelength.

Lasers are not hot or cold *per se*. Rather they are composed of electromagnetic energy that heats an object that absorbs it. The laser itself is not hot at all. Thus, laser beam 18 of Kelman is composed of electromagnetic radiation that raises the temperature of an object that absorbs the energy. It is this absorption of energy that heats the hair and cuts it. However, the beam itself is not hot.

According to the Examiner the air surrounding the hair would be heated as well by the beam due to particle collision with the air. However, even if the air particles would absorb some small amount of the energy of the laser beam, the temperature would not be sufficient to cut hair. The laser beam does not heat the air to a temperature sufficient to cut hair. Contrary to the Examiner's position, what actually heats the hair to a temperature at which it is cut is not heated air but rather the absorption of the electromagnetic energy by the hair. In fact, hair would be cut with exactly the same efficacy in the absence of air. If a laser beam heated air to such temperatures, the transmission of laser beams in air would be grossly inefficient. The Examiner indicates that since the interaction is not a chemical or fossilization process then it must be by heating the air. Actually, absorption of the energy is a quantum process by which the atoms absorb quanta of electromagnetic energy and are heated thereby. Direct (conductive) heating, fossilization and chemical processes are far from the only ways to heat an object. For example, an object placed in the sun will be warmed (by absorption of electromagnetic energy) even when the surrounding air remains cool.

In order for the element to meet the claim limitation of having a temperature, the temperature has to be that of the element itself, independent of whether it is actually cutting hair. It will have this temperature wherever it is measured, even in a vacuum. When applicants pointed this out in the response after final, the Examiner changed tack and indicated that it was air surrounding the laser beam that was heated. As argued

above, the air is not heated to a temperature sufficient to cut hair. Applicants reiterate that they believe that the Examiner's explanation of the physics of hair cutting by a laser is grossly defective and that an electromagnetic beam does not have a temperature, by any reasonable accepted definition.

Applicants further submit that the laser beam is not an element and certainly not a physical element as contended by the Examiner, except in the context of wave-particle duality. Furthermore, the air surrounding the laser beam is not an elongate element either. Even if the beam is considered to comprise photons which carry energy, these photons do not constitute an elongate element and do not have a temperature. If one is looking for some *physical* element in a laser beam it is anything but elongate. Even the various portions of the beam (considered as electromagnetic radiation) are not connected as such to form an elongate element. Furthermore, the air, which the Examiner now wishes to identify as part of the heated elongate element, is also not an elongate element, being made up of atoms and molecules which do not form an element, even if heated.

Moreover, even if one would interpret a laser beam to be a hot element (which applicants deny), the beam is not a *heated* element as recited in the claim, since a heated element can only be interpreted as an element which is present even when not heated. However, laser beam 18 of Kelman does not exist in what the Examiner would like to consider an unheated state. The very existence of the beam (the examiner's original interpretation of elongate element) is predicated on the existence of the photons. Absent the photons, the "elongate element" does not exist. It is difficult to see how one can heat an element, which even according to the Examiner's definition, does not exist in unheated form.

A.2 Claim 11 distinguishes over cited reference

Claim 11 includes a limitation similar to the limitation of claim 7 discussed above. Thus it is patentable at least for the same reasons as claim 7. In addition, claim 11 is not *prima facie* anticipated for yet another reason. It contains the limitation of "collecting the hair cuttings from the skin of the user." In Kelman, the hair cuttings are never deposited on the skin of the user. Rather the collection is made entirely inside the housing. Thus, there is no act of collecting *hair cuttings from* the skin taught by Kelman.

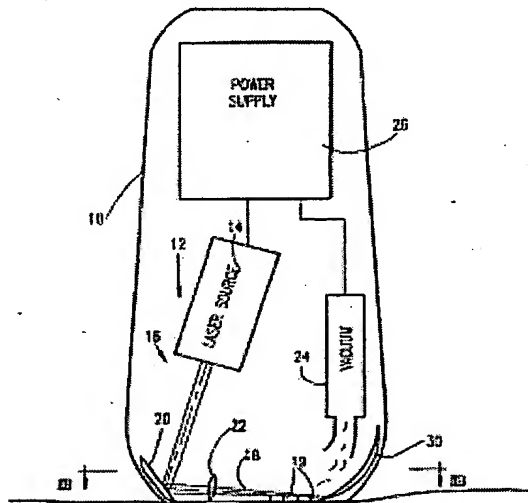
The Examiner explains his rejection in the advisory action as follows:

"The hair being cut derives from the skin and the hair being collected is and electrostatically charged is the same hair that was cut from the skin (pages 6-7). Therefore since the Kelman discloses the hair

being cut by laser beam from skin and collected via the elctrostatically charged element, Kelman fully meets "collecting the hair cuttings from the skin of the user with an electrostatically charged element" given its broadest reasonable interpretation".

The Examiner takes the position that the term "collecting the hair cuttings from the skin of the user" is met by Kelman since the hair collected was cut from the skin. This ignores the plain wording which says "collecting *hair cuttings* from the skin" which, according to the English language, makes clear that the hair cuttings were on the skin before collection. This is not the case in Kelman as explained above. If the claim would refer to "hair *cut* from the skin" then the Examiner's interpretation might make sense. However, the claim clearly recites "hair *cuttings*" and not "hair *cut* from the skin". Accordingly, it is not clear how the Examiner can interpret the claim as he does.

Following is a copy of Kelman's device as depicted in Fig. 2A of the reference:



On page 6, line 27 Kelman notes that vacuum apparatus 24 may be replaced by an electrostatic apparatus:

"The apparatus for collecting loose hairs preferably comprises electrically operated vacuum apparatus 24, such as a suction blower but may alternatively comprise any other suitable hair collection apparatus, such as electrostatic apparatus."

A person of the art, reading Kelman would understand that the electrostatic apparatus of Kelman would be in the same position as the vacuum apparatus 24. As such, it would attract hair as it is cut from the air, much as the vacuum apparatus shown. As such, the electrostatic collection of Kelman would be in a position such that it would

be unable to remove hair from the skin, after the hair is cut. In Kelman, the objective of hair collection is to keep the hair from being deposited on the skin or inside the space containing the laser beam. Once hair is deposited on the skin, it is difficult to remove using remote electrostatic attraction inside a housing.

The Examiner is correct that Kelman does not explicitly say where the hair is collected when it is electrostatically collected. However, a person of the art, when reading this part of Kelman as being a replacement for vacuum apparatus 24, it is clear that it is in the same place as apparatus 24 and that it attracts the hair as it is being cut.

A.3 Claims 10, 13, 15 and 17 distinguish over the cited reference

The dependent claims are patentable at least by virtue of their patentable parent claims.

B. GROUND OF REJECTION 2 (CLAIMS 9 AND 14)

Claims 9 and 14 stand rejected under 35 U.S.C. §103(a) as being obvious over Kelman in view of Inderosa (US Patent No. 5,065,515). Applicants respectfully disagree and submit that the Examiner has not provided a *prima facie* case of obviousness since a combination of Kelman and Inderosa would not result in claims 9 and 14.

Claims 9 and 14 recite that the heated element is a wire. Kelman describes a hair shaving apparatus where the hair is cut by a laser beam. Inderosa describes a system in which hair is shaved by a conventional blade after being softened by a heated element which touches the skin and hair prior to contact of the hair with the skin. Applicants submit that this temperature of this element is strictly limited in order to avoid damage to the skin. Inderosa indicates that the *pre-heating element* can be replaced by a laser, for pre-heating the hair prior to cutting by the blade.

The Examiner contends that it would have been obvious to replace the beam of Kelman with the element of Inderosa, since Inderosa teaches that *pre-heating* can be by a heated metallic element or a laser. It is again noted that in Inderosa the metallic element is used for pre-heating and not for actually cutting the hair which is cut by a blade after heating by the pre-heating element.

The Examiner states in the advisory action as follows:

"If the laser beam can be used to cut and soften hair, it is obvious to one of ordinary skill in the art that a metallic heating element that can be heated to a temperature to soften hair can be heated to a temperature to cut hair".

By this reasoning, the Examiner ignores the fact that the use of a metallic element such as that shown in Inderosa heated to a temperature high enough to cut hair would destroy the skin. It is not incidentally that neither Inderosa nor Kelman teach shaving with a metallic heated element. Kelman realized, as would any person of the art, that utilizing the metallic heated element shown in Inderosa for cutting purpose would destroy the skin together with the hair. Even when teaching the use of a laser for cutting hair, Kelman is careful to describe the wavelength to be used such that it will be absorbed by hair but will not cause damage to the surrounding tissue, see page 2, fourth paragraph:

"In accordance with a preferred embodiment of the invention, the wavelength of the beam is such that it is generally not absorbed by human skin."

Thus, Kelman would not use a metallic element for cutting purposes since the heat produced by the element would be absorbed by the human skin, contrary to the objectives taught by Kelman.

Applicants respectfully submit that the fact that two elements might be equivalent for one purpose (pre-heating of hair) does not *per se* conclude that the elements are equivalent for all purposes. In particular, the elements cannot be equivalent for a purpose for which one is not suitable, such as shaving hair by the metallic heated element shown in Inderosa.

Moreover, the very wording of claims 9 and 14 distinguishes over the element of Inderosa. The claims define the heated element as a "wire." There is no wire in Inderosa. The metallic element of Inderosa is a larger element with a large heat capacity, as shown in Figs. 1-4. It needs to have this large heat capacity so that it can transfer enough energy to the hair without being cooled by the skin. However, if such a structure were used to replace the laser of Kelman, and heated to a temperature as presently claimed, the skin would be burned. There is just no way to utilize the heated metallic element of Inderosa to cut hair. The most it can do is to pre-heat and soften the hair, which is why it is followed by a blade in Inderosa. For this purpose and for this purpose only it might be equivalent to a laser beam.

A person of ordinary skill in the art, reading Inderosa, would understand that in order to reach a relatively low heating of the hair, i.e. not high enough for it to be cut,

laser or metallic element heating may be equivalents. However, when hair is to be cut by the radiation or heat, the hair should reach a substantially higher temperature and the metallic element of Inderosa would not be suitable.

Thus, a combination of the references could at best result in a device where the hair is pre-heated by a metallic heated element and then cut by a laser beam. It is not clear why anyone would want to do this, but replacing the laser beam of Kelman by the metallic element of Inderosa, even with raising its temperature is not obvious since it would not work or rather it would damage the skin. Applicants submit that the combination of the references fails to disclose the feature of "a heated elongate element heated to a temperature sufficient to cut hair" in claim 9 and the similar feature in claim 14.

C. GROUND OF REJECTION 3 (CLAIMS 16 AND 18-36)

Claims 16 and 18-36 stand rejected under 35 U.S.C. §103(a) as obvious over Kelman in view of newly-cited Bermingham (US Patent No. 3,045,345).

Claims 16 and 18-36 depend directly or indirectly from claims 7 and 11 and are each considered to distinguish over the cited reference, in any combination, for at least the same reasons given in support thereof. Bermingham teaches nothing to overcome the deficiencies of Kelman as described above.

Conclusion

Claims 7, 9-11, 13-16 and 18-36 are believed to patentable distinguish over Kelman, Iderosa and Bermingham, in any combination, for at least all of the above reasons. Therefore, it is respectfully requested that the Board reverse the Examiner's final rejection for those claims.

Applicants are separately arguing the patentability of claims 7, 11 and 9/14. The other pending claims are patentable by virtue of their dependency.

Respectfully submitted,



Paul Fenster
Registration No. 33,877

Date: July 8, 2008

CLAIMS APPENDIX

The text of the claims involved in the appeal is as follows:

7. A hair cutting apparatus comprising a structure adapted for contacting an area of skin having hair, the apparatus comprising:

a) a heated elongate element heated to a temperature sufficient to cut hair, mounted on the structure; and

b) an electrostatically charged element adapted for collecting cut hair.

9. Apparatus according to claim 7 wherein the heated element is a wire.

10. Apparatus according to claim 7 wherein the apparatus is a hand held apparatus adapted to be pressed against the skin of a user and cut hair on said skin.

11. A method of collecting cut hair, comprising:

a) cutting hair with a heated elongate element; and

b) collecting the hair cuttings from the skin of the user with an electrostatically charged element.

13. A method according to claim 11 including collecting the cut hair into a receptacle.

14. A method according to claim 11 wherein the heated elongate element is a wire.

15. A method according to claim 11 and including moving the heated elongate element along the surface of the skin of an area from which hair is to be removed by hand.

16. A method according to claim 11 wherein the electrostatically charged element is charged by friction of the element with the skin of a user as it is moved along the skin.

18. Apparatus according to claim 7 and including a housing adapted for holding by a user wherein the electrostatically charged elongate element comprise an outcropping from the housing.

19. Apparatus according to claim 18 wherein the apparatus is adapted to be moved along the skin and wherein the outcropping is spaced from the heated elongate element such that the electrostatically charged element contacts the skin after the hair has been cut.

20. Apparatus according to claim 19 and including one or more collection aids associated with the electrostatically charged element comprising one or more of a comb, a brush and a collection cavity.

21. Apparatus according to claim 7 wherein the apparatus is adapted to be moved along the skin and wherein the electrostatically charged element is spaced from the heated elongate element such that the electrostatically charged element contacts the skin after the hair has been cut.

22. Apparatus according to claim 21 and including one or more collection aids associated with the electrostatically charged element comprising one or more of a comb, a brush and a collection cavity.

23. Apparatus according to claim 7 and including one or more collection aids associated with the electrostatically charged element comprising one or more of a comb, a brush and a collection cavity.

24. A method according to claim 11 wherein the electrostatically charged element is provided as an outcropping adapted to be held by a user.

25. A method according to claim 24 wherein the outcropping is spaced from the heated elongate element such that the electrostatically charged element contacts the skin after the hair has been cut.

26. A method according to claim 25 and including collecting the hair utilizing one or more of a comb, a brush and a collection cavity.

27. A method according to claim 11 wherein the electrostatically charged element is spaced from the heated elongate element such that the electrostatically charged element contacts the skin after the hair has been cut.

28. A method according to claim 27 and including collecting the hair utilizing one or more of a comb, a brush and a collection cavity.

29. A method according to claim 11 and including collecting the hair utilizing one or more of a comb, a brush and a collection cavity.

30. A method according to claim 16 wherein the electrostatically charged element is provided as an outcropping adapted to be held by a user.

31. A method according to claim 30 wherein the outcropping is spaced from the heated elongate element such that the electrostatically charged element contacts the skin after the hair has been cut.

32. A method according to claim 31 and including collecting the hair utilizing one or more of a comb, a brush and a collection cavity.

33. A method according to claim 16 wherein the electrostatically charged element is spaced from the heated elongate element such that the electrostatically charged element contacts the skin after the hair has been cut.

34. A method according to claim 33 and including collecting the hair utilizing one or more of a comb, a brush and a collection cavity.

35. A method according to claim 16 and including collecting the hair utilizing one or more of a comb, a brush and a collection cavity.

36. A method according to claim 11 wherein the electrostatically charged element is adapted to collect said cut hair from the skin.

EVIDENCE APPENDIX

This appeal brief presents no additional evidence

RELATED PROCEEDINGS APPENDIX

This appeal has no related proceedings